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| <b>Product Specification(产品规格书)</b>  | <b>Issued By:<br/>Engineering Dept.</b> |           |
| <b>Subject (主题):</b><br>3.00mm Pitch KR3000 Series Wire To Board Connector Specification | <b>Date Issued</b>                      | 2022/2/26 |
|  | <b>Date Revised</b>                     | 2022/2/26 |
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**1.0 适用范围 (Scope)**

此种规格包括3.00mm Pitch KR3000 Series 连接器规格说明.

This Specification Covers the 3.00mm Pitch KR3000 Series Connector Specification.

**2.0 规格与料号 (Spec and Part number)**

| 规格内容<br><b>Specification</b> | 产品料号<br><b>Production No.</b>   | 产品图示<br><b>Picture of Product</b> |
|------------------------------|---|-----------------------------------|
| 胶壳/Housing                   | H3000M1****01A<br>H3000M2*****A   |                                   |
| 端子/Terminal                  | T3000FP***01A<br>T3000FP***01C  |                                   |
| 针座/Wafer                     | C3000RD1*****A<br>C3000VD1*****PA<br>C3000RS1**14*****RA<br>C3000VS1**14*****RA<br>C3000RD2*****A<br>C3000VD2*****A<br>C3000RS2**14M01**RA<br>C3000VS2**14M01**RA |                                   |

**3.0 材质与表面处理 (Disposal of Material and surface)**

| 规格内容<br><b>Specification</b> |          | 材质<br><b>Materials</b> | 表面处理<br><b>Disposal of Surface</b> |                             |
|------------------------------|----------|------------------------|------------------------------------|-----------------------------|
| 胶壳/Housing                   |          | PA66                   | UL94 V-0/2                         |                             |
| 端子/Terminal                  |          | Phosphor Bronze        | Tin/Gold Plated Over Nicke         |                             |
| 针座/<br>Wafer                 | SMT Type | 主体<br>Base             | LCP                                |                             |
|                              |          | 导体<br>Contact          | Brass                              |                             |
|                              |          | 固定片<br>Solder tab      | Brass                              |                             |
|                              | DIP Type | 主体<br>Base             | PA9T or PA46 or LCP                | UL94 V-0                    |
|                              |          | 导体<br>Contact          | Brass                              | Tin/Gold Plated Over Nickel |
|                              |          | 固定片<br>Solder tab      | None                               | None                        |

(以上参数请以工程图为准/Please Refer to the Project drawing for the above Specification)

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#### 4.0 额定等级 (Ratings and applicable wires)

| 项 目<br>Item                        | 规 格<br>Standard                                |       |
|------------------------------------|--|-------|
| 额定电压Rated Voltage (Max.)           | 250V   | AC/DC |
| 额定电流Rated Current (Max.)           | 5A(20AWG)                                      |       |
| 使用温度范围Ambient temperature Range    | -40°C~+105°C                                   |       |
| 适用线径Applicable wire insulation O.D | AWG 20# ~ 24#<br>Insulation O.D. 1.3 to 1.8 mm |       |

#### 5.0 电气性能 (Electrical Performance)

| 项 目<br>Item                          | 条 件<br>Test Condition   | 规 格<br>Requirement                         |
|--------------------------------------|---|--|
| 5.1<br>接触阻抗<br>Contact Resistance    | 公母配合,开放电压20mV 最大,电流100mA最大<br>检测连接器 A~B 区.<br>Mate connectors, measure by dry circuit, 20mV<br>MAX, 100mA MAX.<br>(Based upon EIA-364-23C)  | 10 milliohms Max.                          |
| 5.2<br>绝缘阻抗<br>Insulation Resistance | 公母配合,对相邻两接触导体,于1分钟内施加<br>500V 的直流电,并量测其间绝缘阻抗.<br>Mate connectors,apply 500V DC for 1 minute<br>between adjacent contacts to measure the<br>insulation resistance.<br>(Based upon EIA-364-21B) | 1000 Megohms Min.                          |
| 5.3<br>耐电压<br>Dielectric Strength    | 公母配合,在相邻端子或 端子与接地端之间, 使<br>用1500V 的交流电 1 分钟,检测连接器.<br>Mate connectors, apply 1500V AC for 1 minute<br>between adjacent terminal or ground.<br>(Based upon EIA-364-20A)                        | 无损毁或出现电火花<br>No Breakdown and<br>Flashover |

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**6.0 机械性能 (Mechanical Performance)**

| 项 目<br>Item                    |   | 条 件<br>Test Condition  |           | 规 格<br>Requirement                |           |
|--------------------------------|---|--|-----------|-----------------------------------|-----------|
| 6.1                            | 插拔力<br>Insertion & Withdrawal Force       | 以每分钟25.4±3mm的速率插入和拔出。<br>(不包含卡榫结合力)<br>Insert and withdraw connectors at the speed rate of 25.4±3mm/minute.<br>(Excluding plastic detents)<br>(Based upon EIA-364-13D) |           | 参照第8.0项<br>Refer to paragraph 8.0 |           |
| 6.2                            | 端子插入力<br>Terminal Insertion Force         | 铆线后之端子插入胶壳。<br>Insert the crimped terminal into the housing.   |           | 1.5 kgf (14.7 N) Max.             |           |
| 6.3                            | 端子保持力<br>Terminal/Housing Retention Force | 以每分钟25.4±3mm的速率,将端子从胶壳内轴向拔出的力量。<br>Apply axial pull out force at the speed rate of 25.4±3mm/minute on the terminal assembled in the housing.                           |           | 2.5 kgf (24.5 N) Min.             |           |
| 6.4                            | Pin 针保持力<br>Pin Retention Force           | 以每分钟25.4±3mm的速率,将PIN针从Wafer 内轴向拔出的力量。<br>Apply axial push force at the speed rate of 25.4±3mm/minute.  |           | 1.5 kgf (14.7 N) min.             |           |
| 6.5                            | 端子压接<br>Terminal Crimping Specification   | Wire Size  | 20 AWG    | 22 AWG                            | 24 AWG    |
|                                |   | ① Crimp width  | 1.55±0.10 |                                   |           |
|                                |   | ① Crimp height   | 1.10±0.05 | 1.00±0.05                         | 0.87±0.05 |
|                                |   | ② Crimp width  | 1.85 Max. |                                   |           |
|                                |   | ② Crimp height   | 1.95 Max. | 1.75 Max.                         | 1.65 Max. |
|                                |   | Crimp strength (kgf)   | 6.8 Min.  | 4.54 Min.                         | 3.63 Min. |
|                                |   | Stripping (mm)   | 2.5~3.0   |                                   |           |
| ①Conductor(mm) ②Insulation(mm) |   |  |           |                                   |           |

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**7.0 环境性能及其它 (Environmental Performance and Others)**

| 项 目<br>Item |                          | 条 件<br>Test Condition  | 规 格<br>Requirement         |                     |
|-------------|--------------------------|--|----------------------------|---------------------|
| 7.1         | 耐久性<br>Durability        | 以每分钟不超过 10 次的速率,将公母插拔30次.<br>When mated up to 30 cycles repeatedly by the rate of 10 cycles per minute.<br>(Based upon EIA-364-09C)  | 接触阻抗<br>Contact Resistance | 20 milliohms Max.   |
| 7.2         | 温升测试<br>Temperature Rise | 公母对插后,在通过额定电流下,所测定的温度.<br>Carrying rated current load.<br>(Based upon EIA-364-70B)   | 温升测试<br>Temperature Rise   | 30°C Max.           |
| 7.3         | 耐振动性<br>Vibration        | 振幅: 1.5mm P-P<br>时间: 10~55~10 HZ in 1 minute<br>持续时间: 每轴向 2 小时<br>Amplitude: 1.5mm P-P<br>Sweep time: 10~55~10 HZ in 1 minute<br>Duration: 2 hours in each X.Y.Z axials.<br>(Based upon EIA-364-28B) | 外观<br>Appearance           | 无异状<br>No Damage    |
|             |                          |  | 接触阻抗<br>Contact Resistance | 20 milliohms Max.   |
|             |                          |  | 瞬断<br>Discontinuity        | 1 micro-second Max. |
| 7.4         | 耐冲击性<br>Shock            | 在 X.Y.Z 上 6 个方向上,以 490m/s2(50g 的力量)冲击下各 3 回.<br>490m/s2{50g}, 3strokes in each X.Y.Z. axes.<br>(Based upon EIA-364-27B)  | 外观<br>Appearance           | 无异状<br>No Damage    |
|             |                          |  | 接触阻抗<br>Contact Resistance | 20 milliohms Max.   |
|             |                          |  | 瞬断<br>Discontinuity        | 1 micro-second Max. |
| 7.5         | 耐热性<br>Heat Resistance   | 105±2°C,96 hours.<br>(Based upon EIA-364-17B)  | 外观<br>Appearance           | 无异状<br>No Damage    |
|             |                          |  | 接触阻抗<br>Contact Resistance | 20 milliohms Max.   |
| 7.6         | 耐寒性<br>Cold Resistance   | -40±2°C,96 hours.<br>( Based upon EIA-364-59)  | 外观<br>Appearance           | 无异状<br>No Damage    |
|             |                          |  | 接触阻抗<br>Contact Resistance | 20 milliohms Max.   |

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| 项 目<br>Item |                         | 条 件<br>Test Condition  | 规 格<br>Requirement            |   |
|-------------|-------------------------|--|-------------------------------|---|
| 7.7         | 耐湿性<br>Humidity         | 温度: 40±2℃<br>湿度: 90~95%(RH)<br>持续时间: 96 hours<br>Temperature: 40±2℃<br>Relative Humidity: 90~95%<br>Duration: 96 hours<br>(Based upon EIA-364-31B)   | 外观<br>Appearance              | 无异状<br>No Damage  |
|             |                         |  | 接触阻抗<br>Contact Resistance    | 20 milliohms<br>Max.  |
|             |                         |  | 耐电压<br>Dielectric Strength    | Must meet 5.3   |
|             |                         |  | 绝缘阻抗<br>Insulation Resistance | 100 Megohms<br>Min.   |
| 7.8         | 热冲击<br>Thermal shock    | 以-40℃持续30分钟经室温5分钟,而后以105℃持续30分钟再经室温5分钟为一个循环,共循环5次.<br>One Cycle Consists Of:<br>-40℃ for 30 minutes.<br>→ Room Temp. 5 minutes,<br>+105℃ for 30minutes.<br>→ Room Temp. 5 minutes<br>Total Cycles: 5 Cycles.<br>(Based upon EIA-364-32B) | 外观<br>Appearance              | 无异状<br>No Damage  |
|             |                         |  | 接触阻抗<br>Contact Resistance    | 20 milliohms<br>Max.  |
| 7.9         | 盐水喷雾<br>Salt Spray      | 在温度35±2℃,盐水浓度5±1%下,盐水喷雾 24 小时.<br>24 hours exposure to a salt spray from the 5±1% solution at 35±2℃.<br>(Based upon EIA-364-26B)   | 外观<br>Appearance              | 无异状<br>No Damage  |
|             |                         |  | 接触阻抗<br>Contact Resistance    | 20 milliohms<br>Max.  |
| 7.10        | 焊锡附着性<br>Solder-ability | 焊接时间: 3±0.5 秒.<br>焊接温度: 245±5℃.<br>Soldering Time: 3±0.5 second.<br>Solder Temperature: 245±5℃.<br>(Based upon EIA-364-52)   | Solder Wetting                | 浸渍面积需95%以上<br>95% of immersed area must show no voids, pin holes. |

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| 项 目<br>Item |                            | 条 件<br>Test Condition   | 规 格<br>Requirement |                  |
|-------------|----------------------------|---|--------------------|------------------|
| 7.11        | 焊锡耐热性<br>Solder-Resistance | SMT型产品，能够承受焊锡耐热范围。<br>SMT type products, able to withstand the solder heat resistance range.<br>参考温度曲线图9.1<br>Refer to Temperature Profile9.1<br>(Based upon EIA-364-56D) | 外观<br>Appearance   | 无异状<br>No Damage |
|             |                            | DIP型产品，能够承受焊锡耐热范围。<br>DIP type products, able to withstand the solder heat resistance range.<br>参考温度曲线图9.2<br>Refer to Temperature Profile9.2<br>(Based upon EIA-364-71B) | 外观<br>Appearance   | 无异状<br>No Damage |

**8.0 综合插入力及拔出力 (Insertion/withdrawal force)**

<Unit: kgf>

单排 Single Row

| No. of Circuits<br>PIN数 | At Initial<br>首次插入与拔出力<br>(初始值) |                   | At 30 <sup>th</sup><br>30次插入<br>与拔出后 | No. of Circuits<br>PIN数 | At Initial<br>首次插入与拔出力<br>(初始值) |                   | At 30 <sup>th</sup><br>30次插入与<br>拔出后 |
|-------------------------|---------------------------------|-------------------|--------------------------------------|-------------------------|---------------------------------|-------------------|--------------------------------------|
|                         | I.F.(MAX.)<br>插入力               | R.F.(MIN.)<br>拔出力 | R.F.(MIN.)<br>拔出力                    |                         | I.F.(MAX.)<br>插入力               | R.F.(MIN.)<br>拔出力 | R.F.(MIN.)<br>拔出力                    |
| 2                       | 1.60                            | 0.50              | 0.50                                 | 8                       | 6.40                            | 2.00              | 2.00                                 |
| 3                       | 2.40                            | 0.75              | 0.75                                 | 9                       | 7.20                            | 2.25              | 2.25                                 |
| 4                       | 3.20                            | 1.00              | 1.00                                 | 10                      | 8.00                            | 2.50              | 2.50                                 |
| 5                       | 4.00                            | 1.25              | 1.25                                 | 11                      | 8.80                            | 2.75              | 2.75                                 |
| 6                       | 4.80                            | 1.50              | 1.50                                 | 12                      | 9.60                            | 3.00              | 3.00                                 |
| 7                       | 5.60                            | 1.75              | 1.75                                 |                         |                                 |                   |                                      |

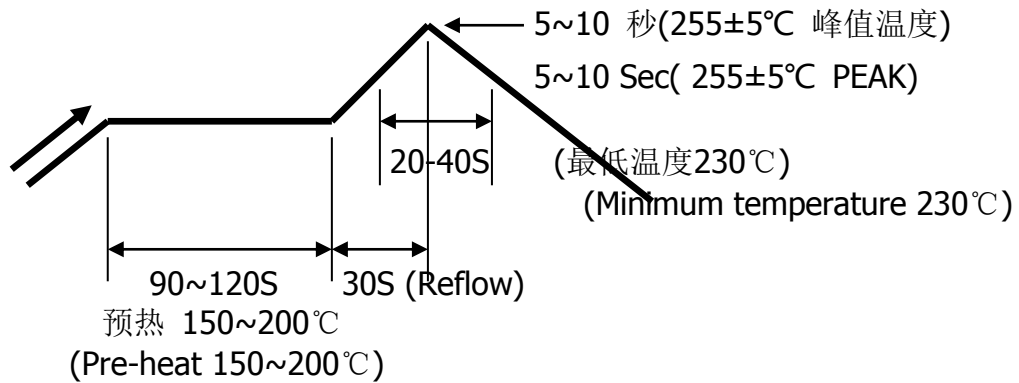
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双排 Dual Row

| No. of Circuits<br>PIN数 | At Initial<br>首次插入与拔出力<br>(初始值) |                   | At 30 <sup>th</sup><br>30次插入<br>与拔出后 | No. of Circuits<br>PIN数 | At Initial<br>首次插入与拔出力<br>(初始值) |                   | At 30 <sup>th</sup><br>30次插入与<br>拔出后 |
|-------------------------|---------------------------------|-------------------|--------------------------------------|-------------------------|---------------------------------|-------------------|--------------------------------------|
|                         | I.F.(MAX.)<br>插入力               | R.F.(MIN.)<br>拔出力 | R.F.(MIN.)<br>拔出力                    |                         | I.F.(MAX.)<br>插入力               | R.F.(MIN.)<br>拔出力 | R.F.(MIN.)<br>拔出力                    |
| 2*1                     | 1.60                            | 0.50              | 0.50                                 | 2*7                     | 11.20                           | 3.50              | 3.50                                 |
| 2*2                     | 3.20                            | 1.00              | 1.00                                 | 2*8                     | 12.80                           | 4.00              | 4.00                                 |
| 2*3                     | 4.80                            | 1.50              | 1.50                                 | 2*9                     | 14.40                           | 4.50              | 4.50                                 |
| 2*4                     | 6.40                            | 2.00              | 2.00                                 | 2*10                    | 16.00                           | 5.00              | 5.00                                 |
| 2*5                     | 8.00                            | 2.50              | 2.50                                 | 2*11                    | 17.60                           | 5.50              | 5.50                                 |
| 2*6                     | 9.60                            | 3.00              | 3.00                                 | 2*12                    | 19.20                           | 6.00              | 6.00                                 |

**9.0 温度曲线 (Temperature Profile)**

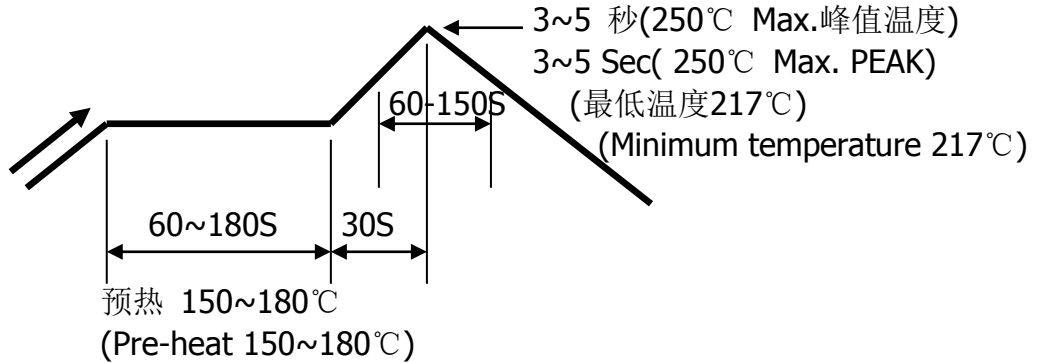
**9.1 SMT红外线回流曲线(SMT Infrared Reflow Profile)**





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**9.2 波峰焊曲线(Wave soldering profile)**



注：由于P.C板等焊接装置改变条件,所以请预先用自己的装置检查焊接条件.

Notes: Please check welding conditions by your own devices beforehand. Because the condition changes by the soldering devices, P.C.boards, and so on.

**10.0 备注 (Remark)**

有关规格书内容经变更或改版，如未能及时发布与通知，烦请联系我司业务人员提供产品最新资讯

Any change or revision for the product specification will not be announced in advance. Please contact our sales representative for the latest information.

Written: Arvin

Checked: /

Approved: Min xinhao